

eye too exclusively upon the Differential Calculus, of which this publication was a kind of confession." This seems to be true, and it is to be observed that, although great interest has been displayed in the history of the introduction of the Differential Calculus into the Cambridge examinations, but little attention has been devoted to the gradual growth of Analytical Geometry as a separate subject, which was taking place at about the same time. It is interesting to remark that the reasons which induced Hamilton to recur to the focus and directrix property as a definition still hold good; and that, although there is no doubt that, in a scientific development of the subject, the discussion of the general equation of the second degree should precede that of the particular cases, the subject is rendered much easier for the beginner if the parabola, ellipse, and hyperbola are considered separately immediately after the circle; and the method adopted by Hamilton in his *Conic Sections* has been generally followed in the multitude of text-books which have been published in recent years.

The Royal Astronomical Society had its origin in a meeting of fourteen gentlemen at Freemasons' Tavern on January 12, 1820, and was formally founded on February 8, 1820. Only two months later, on April 14, Hamilton was elected a Fellow, and at the time of his death he was the oldest Fellow of the Society. He thus connected the present time, not only with the revival of mathematics in England, but also with the foundation of the Society. Nearly all his contemporaries who were engaged in similar work near the beginning of the century, Herschel, Peacock, Babbage, Whewell, De Morgan, have passed away and their share in the movement has already been recorded in the pages of the *Monthly Notices*. It may be remarked, however, that the Society still numbers among its Fellows Mr. J. C. Ebden, who was sixth wrangler in Hamilton's year (1816), and was elected a Fellow of the Society only two months later than Hamilton, on June 9, 1820. Hamilton was elected a Fellow of the Royal Society on January 17, 1828; he was also a Fellow of the Royal Society of Edinburgh, and of the Geological Society.

J. W. L. G.

WILLIAM AUGUSTUS HARRIS was born at Bovey Tracey, in Devonshire, and was educated at Blundell's School, Tiverton. He obtained a Scholarship at Balliol College, Oxford, and was placed in the second class in the Final Examination in Law and Modern History. In 1869 he was called to the English bar, and in 1870 to the American bar. His constant trips to the United States in the years 1871-1877 greatly impaired his health, which completely broke down in 1878. He spent the earlier part of the winter of that year at Davos, and then proceeded to San Remo, whence he returned to England in May 1879 rather worse than better for his residence abroad. In the February following

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he died of consumption at the early age of 33, in the midst of a promising career.

He was the author of several books, the last of which—*Harris's Mining Laws*, published in 1877—is a work of much use to the profession.

He was elected a Fellow of this Society on February 11, 1870, and was a member of the Eclipse Expedition to Sicily in that year.

WILLIAM LASSELL died at Maidenhead, October 5, 1880, aged 81 years. He was born at Bolton, Lancashire, June 18, 1799. He acquired the rudiments of education at a day school in his native town, during which period his father died, and he thence went for eighteen months to an academy at Rochdale.

In 1814 he entered a merchant's office at Liverpool, and there served a seven years' apprenticeship. He commenced business in Liverpool as a brewer about the year 1825, without, however, much taste or inclination for trade, and spent almost all his leisure time in his favourite pursuit of astronomy and the mechanics connected therewith.

Mr. Lassell possessed a great love and aptitude for mechanical invention, and for this reason "he belonged," to use the words of Sir John Herschel, "to that class of observers who have created their own instrumental means, who have felt their own wants, and supplied them in their own way." The qualities which enabled Mr. Lassell to do all this made him what he was. The work was the revelation of the man. He felt precisely where lay the difficulties and wants which met him in his work, because he was sensitive and sympathetic. He could deal successfully with these difficulties and supply these wants often in a masterly and original way, because he could think for himself cautiously yet boldly. He could work out his conceptions in new and difficult directions to a successful issue, because the constancy of his character showed itself here in concentration of thought and perseverance of action. These qualities, sensitive sympathy, wise prudence, constancy, were those which pre-eminently characterised him as a man and made him to those who knew him a friend of rare worth.

In the history of science Mr. Lassell's name will rank with those of Herschel and the late Lord Rosse in connection with that essentially British instrument, the reflecting telescope, whether we consider the genius and perseverance displayed in the construction of these instruments, or the important discoveries which have resulted from their use. About 1820 Mr. Lassell, then in his twenty-first year, began to construct reflecting telescopes for himself. It is perhaps to circumstances which he at the time considered unfavourable that science is indebted for much that Mr. Lassell has accomplished. At that time he did not possess sufficient means to enable him to purchase expensive instruments, and besides "his business avocations were such as